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मानक

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Mazdoor Kisan Shakti Sangathan

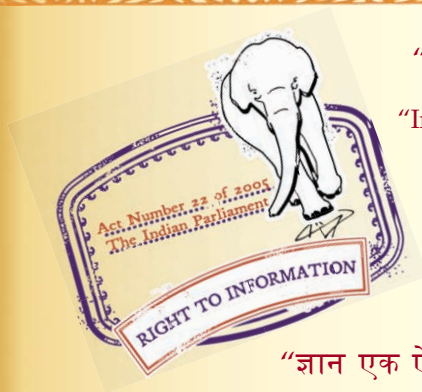
“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS/ISO 9962-3 (1994): Manually Operated Drafting Machines,
Part 3: Dimensions of Scale Rule Chuck Plates [PGD 22:
Educational Instruments and Equipment]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
हस्त चालित ड्राफ्टिंग मशीनें
भाग 3 स्केल रूलचक प्लेट के आयाम

Indian Standard

MANUALLY OPERATED DRAUGHTING MACHINES

PART 3 DIMENSIONS OF SCALE RULE CHUCK PLATES

ICS 01.100.40

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BUREAU OF INDIAN STANDARDS

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NATIONAL FOREWORD

This Indian Standard which is identical with ISO 9962-3 : 1994 'Manually operated draughting machines — Part 3 : Dimensions of scale rule chuck plates', issued by International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendation of the Optical and Mathematical Instruments Sectional Committee (LM 20) and approval of Light Mechanical Engineering Division Council.

The standard has been published in following three parts:

Part 1 Definitions, classification and designation;

Part 2 Characteristics, performance, inspection and marking; and

Part 3 Dimensions of scale rule chuck plates.

The requirements of draughting machines were earlier covered in IS 2287 : 1970 'Specification for drafting machines (*first revision*)' which will be withdrawn after publication of all three parts. IS 2287 : 1970 was also covering the certification of draughting machines which will now be covered by Part 2 of IS/ ISO 9962-2 : 1992.

In this standard, the straight slots have been provided for scale rule chuck plates as shown in Fig. 1b and Fig. 2b. The Indian industry, however, is mostly manufacturing and using scale rule chuck plates having radial slots. Therefore, provisions for radial slot have also been included as an alternate to straight slot and are given in National Annex of the standard.

The standard covers 60 mm and 63 mm pitch of holes (see Table 1) in respect of large scale rule chuck plates, though only 60 mm pitch of holes is commonly used.

The text of ISO Standard has been approved as suitable for publication as Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- Comma (,) has been used as a decimal marker while in Indian Standards the current practice is to use a point (.) as the decimal marker.

In this adopted standard reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards which are to be substituted in their place are listed below along with their degree of equivalence for the additions indicated.

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 3 : 1973	IS 1076 (Part 1) : 1985 Preferred numbers: Part 1 Series of preferred numbers (<i>second revision</i>)	Identical
ISO 128 : 1982	IS 10714 : 1983 General principles of presentation on technical drawings	Identical
ISO 9960-1 : 1992	IS/ISO 9960-1 : 1992 Draughting instruments with or without graduation — Part 1 : Draughting scale rules	Identical
ISO 9962-1 : 1992	IS/ISO 9962-1 : 1992 Manually operated draughting machines — Part 1 : Definitions, classification and designation	Identical

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Indian Standard

MANUALLY OPERATED DRAUGHTING MACHINES

PART 3 DIMENSIONS OF SCALE RULE CHUCK PLATES

1 Scope

This part of ISO 9962 specifies the main dimensions of scale rule chuck plates and the combined heights (thickness) of scale rule and scale rule chuck plate for use on manually operated draughting machines (see ISO 9962-1 and ISO 9962-2).

NOTE 1 For uniformity among the figures given throughout this part of ISO 9962, the relative positions of views are those provided by the first angle projection method (see ISO 128). It should be understood, however, that the third angle projection method could equally be used.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 9962. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 9962 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 9960-1:1992, *Draughting instruments with or without graduation — Part 1: Draughting scale rules*.

ISO 9962-1:1992, *Manually operated draughting machines* — Part 1: Definitions, classification and designation.

chines — Part 1: Definitions, classification and designation.

3 Definitions

For the purposes of this part of ISO 9962, the definitions given in ISO 9962-1 and the following definition apply.

3.1 scale rule chuck plate: Attachment to connect a scale rule to the scale rule mounting plate.

4 Dimensions

4.1 Scale rule chuck plate

The dimensions of the scale rule chuck plate shall conform to figures 1 and 2 and to table 1. The choice of hole-type or slot-type, as well as details not established in this part of ISO 9962, is at the discretion of the manufacturer.

4.2 Combined scale rule and scale rule chuck plate

The combined height, K , of the scale rule and scale rule chuck plate shall conform to figure 3 and table 2 and may be adjusted by inserting a washer, etc. between the scale rule body and the scale rule chuck plate.

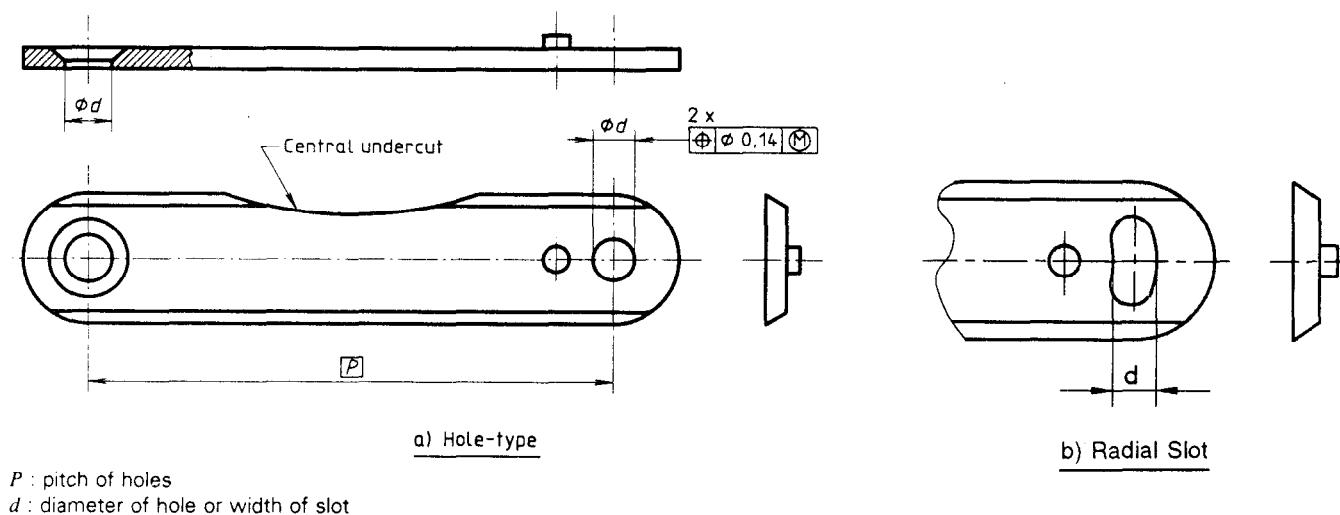


Figure 1 — Scale rule chuck plate, parallel type, screw-on

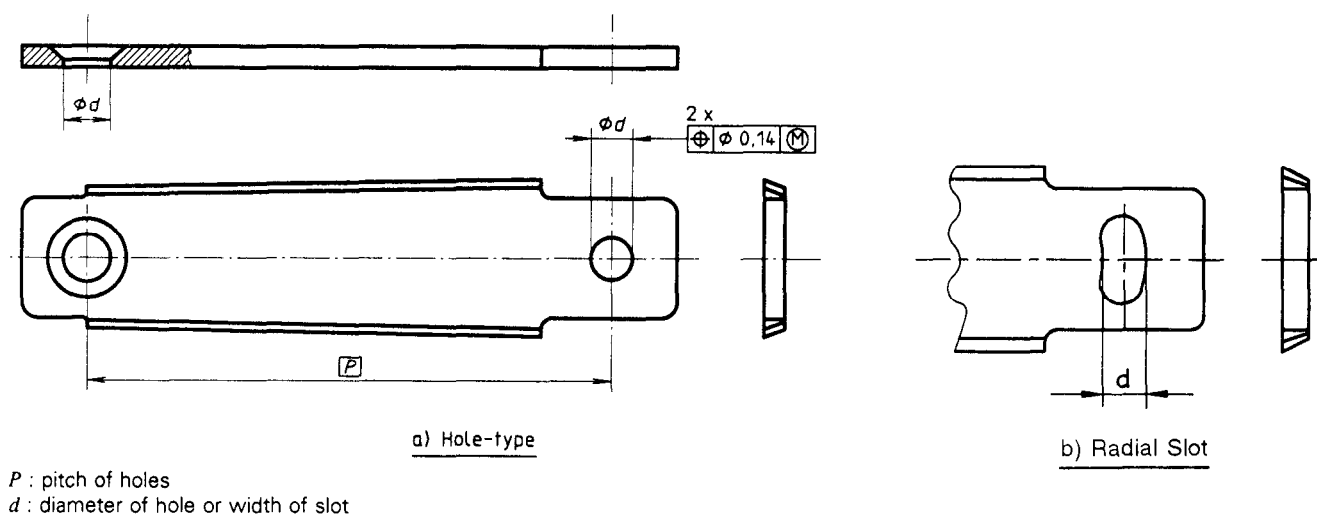


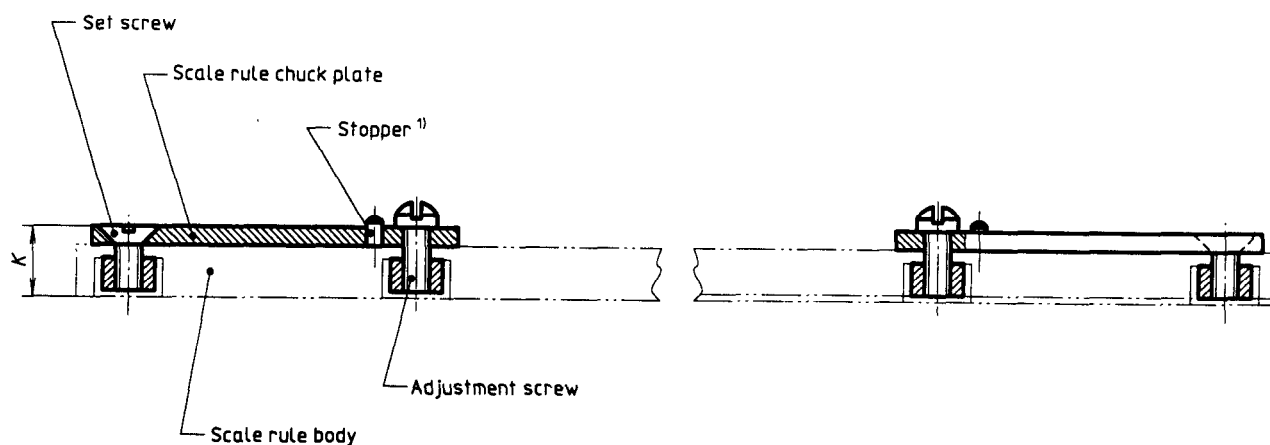
Figure 2 — Scale rule chuck plate, taper type, taper fit

Table 1 — Parallel and taper scale rule chuck plate dimensions

Dimensions in millimetres

Size	Pitch of holes ¹⁾ P	Diameter of hole or width of slot d
Large	63 60	6,3 $^{+0.5}_0$
Small	50 45	5 $^{+0.4}_0$

1) When this standard is reviewed, further consideration shall be given to adopting a single dimension for P , based on the R series of preferred numbers (see ISO 3).



1) For parallel type only.

Figure 3 — Scale rule chuck plate mounted on scale rule

Table 2 — Combinations of scale rule chuck plate and scale rule

Dimensions in millimetres

Dimensions in millimetres

Scale rule chuck plate		Width of scale rule body (ISO 9960-1)	Designation	Combined height, <i>K</i>	
Type	Size			nominal	Permissible deviation
Parallel ¹⁾ (P)	Large (L)	Large (L)	PLL	7,5 or 7	+0,3 -0,2
		Medium (M)	PLM		
	Small (S)	Medium (M)	PSM	7; 6,5 or 6	
		Small (S)	PSS		
Taper ²⁾ (T)	Large (L)	Large (L)	TLL	7,5 or 7	
		Medium (M)	TLM		
	Small (S)	Medium (M)	TSM	7; 6,5 or 6	
		Small (S)	TSS		

1) Parallel type: screw-on.

2) Taper type: taper fit.

1) Parallel type: screw-on.

2) Taper type: taper fit.

5 Designation

The designation of scale rule chuck plates shall consist of the following in the order given:

- a) "Scale rule chuck plate";
- b) reference to this part of ISO 9962;
- c) the connection type, as specified in table 2;
- d) the chuck plate dimension, as specified in table 1;
- e) the width of the scale rule body, as specified in table 2;
- f) the pitch of holes, as specified in table 1;

- g) the relevant dimension, K , as specified in table 2, times 10.

EXAMPLES

Designation for a scale rule chuck plate of parallel type (P), large size (L) and large width of scale rule body (L), pitch of holes 60 mm, with combined height $K = 7,5$ mm (75) of scale rule body and scale rule chuck plate:

Scale rule chuck plate ISO 9962-3 - PLL 60 - 75

Designation for a scale rule chuck plate of taper type (T), small size (S) and medium width of scale rule body (M), pitch of holes 45 mm, with combined height $K = 6,5$ mm (65) of scale rule body and scale rule chuck plate:

Scale rule chuck plate ISO 9962-3 - TSM 45 - 65

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ISO 9962-2 : 1992	IS/ISO 9962-2 : 1992 Manually operated draughting machines — Part 2 : Characteristics, performance, inspection and marking	Identical
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For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Handbook' and 'Standards : Monthly Additions'.

This Indian Standard has been developed from Doc : No. LM 20 (0359).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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